



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/737,314

12/16/2003

Yogesh B. Gianchandani

30275/2419

5950

4743

7590

07/10/2008

MARSHALL, GERSTEIN & BORUN LLP
233 S. WACKER DRIVE, SUITE 6300
SEARS TOWER
CHICAGO, IL 60606

EXAMINER

YABUT, DIANE D

ART UNIT

PAPER NUMBER

3734

MAIL DATE

DELIVERY MODE

07/10/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/737,314	Applicant(s) GIANCHANDANI ET AL.	
	Examiner DIANE YABUT	Art Unit 3734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 and 36-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 and 36-47 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/28/2008 and 03/17/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to applicant's amendment received on 02/21/2008.

The examiner acknowledges the amendments made to the claims.

Information Disclosure Statement

1. The information disclosure statements (IDS) submitted on 05/28/2008 and 03/17/2008 are acknowledged. The submissions are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statements are being considered by the examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, 6, 8-14, 16, 36-44, and 46-47 are rejected under 35 U.S.C. 102(b) as being anticipated by **Fischell** (U.S. Patent No. **6,086,604**).

Claims 1-3, 6, 8-14, 16, 36-44, and 46-47: Fischell discloses first **4T** and second **4B** parallel spaced apart side beams which extend continuously along a longitudinal axis, and a plurality of spaced cross-bands including a series of folded beams having an involute or switchback pattern which connect the side beams together wherein a first set of the cross-bands **2'''** are expandable in a first direction substantially perpendicular to

Art Unit: 3731

the longitudinal axis to form a 3-D structure (Figures 6-9). A second set of the cross-bands **2'''** are expandable in a second direction substantially opposite the first-direction to form a mesh-like tubular 3-D structure and each of the cross-bands include hinges (**4R** and **4L**) for interconnecting adjacent folding beams and allowing folded back beam sections to rotate relative to one another about a rotation axis (from Figure 4 to Figures 6-7). The side beams may include biocompatible surface coatings and be made of biocompatible metal such as a shape-memory alloy (col. 3, lines 60-67 and col. 4, lines 16-31). The first set of cross-bands includes six pairs of interconnected and folded back first and second beam sections (on either side of **4R** and **4L**) that cooperate with one another to traverse the space between the side beams, and wherein the longest beam section extends perpendicular to the longitudinal axis (at the connection to **4T** or **4B**) or extends parallel to the longitudinal axis (Figures 6-7). The first and second beam sections also rotate about a center by at least 90 degrees during expansion (from Figure 4 to Figure 6). The second set of cross-bands is identical and offset, or 180 degree rotations, to the first set of cross-bands when looking at the stent from a top plan view (Figure 7).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischell** (U.S. Patent No. **6,086,604**).

Claims 4-5: Fischell discloses the claimed device, but does not expressly disclose the planar structure plastically deforming during expansion so that the 3-D structure is free standing and has a cylindrical geometry. However, it would have been obvious to one of ordinary skill at the time of invention for the stent of Fischell to plastically deform during expansion since Fischell teaches that the stent be made of a shape memory metal such as nitinol (col. 3, lines 60-67), which is well known in the art to plastically deform to maintain an expanded shape and provide support to a body vessel.

Claim 15: Fischell does not expressly disclose having the side beams and cross-bands be made of at least one of a biocompatible and a biodegradable polymer. It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a biocompatible and a biodegradable polymer to the stent of Fischell, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use.

6. Claims 7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischell** (U.S. Patent No. **6,086,604**) in view of **Smith** (U.S. Pub. No. **2002/0156525**).

Claims 7 and 17: Fischell discloses the claimed device except for the planar structure including a conductive foil and the sheet material including conductive foil, and wherein side beams and cross-bands are formed by electric discharge machining the conductive foil.

Smith teaches a conductive foil and the sheet material including conductive foil, and wherein side beams and cross-bands are effectively formed by electric discharge machining the conductive foil (page 3, paragraph 33). It would have been obvious to one of ordinary skill in the art at the time of invention to provide conductive foil and forming the cross-bands by electric discharge machining, as taught by Smith, to Fischell in order to form the stent “faster and with higher quality.”

7. Claims 18-23, 25, and 45 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischell** (U.S. Patent No. **6,086,604**) in view of **Pacetti** (U.S. Pub. No. **20020188345**).

Claims 18-23, 25, and 45: Fischell discloses the claimed invention, including the 3-D structure comprising a helical coil including first and second spaced rings at opposite ends thereof and wherein each of the rings is formed by an adjacent pair of expanded crossbands (Figures 1-3), except for at least the first side beam including a link portion being thinned or being made of a fragile material relative to the other portions of the first side beam having a mechanical strength lower than other portions of the first side beam

to allow the first side beam to break at the link portion during expansion of the first set of cross-bands, the structure comprising at least one electrical inductor.

Pacetti teaches at least a first side beam including a link portion being thinned or being made of a fragile material relative to the other portions of the first side beam having a mechanical strength lower than other portions of the first side beam to allow the first side beam to break at the link portion during expansion of the first set of cross-bands, the structure comprising at least one electrical inductor (page 2, paragraph 23 and page 4, paragraph 36). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a weak link portion, as taught by Pacetti, to Fischell in order to facilitate imaging the stent with MRI.

8. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischell** (U.S. Patent No. **6,086,604**) in view of **Pacetti** (U.S. Pub. No. **20020188345**), as applied to claim 23 above, and further in view of **Da Silva** (U.S. Patent No. **6,729,336**).

Claim 24: Fischell and Pacetti disclose the claimed device including a first ring and side beams and cross-bands, except for the elements including a dielectric part which mechanically connects but electrically insulates adjacent portions of the structure.

Da Silva teaches a stent including a dielectric part which mechanically connects but electrically insulates adjacent portions of the structure in order to enhance a signal (col. 7, lines 7-24). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a dielectric part which also insulates, as taught by Da Silva, to Fischell and Pacetti in order to better enhance a signal.

9. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Fischell** (U.S. Patent No. **6,086,604**) in view of **Da Silva** (U.S. Patent No. **6,729,336**).

Claim 26: Fischell discloses the claimed device including a first ring and side beams and cross-bands, except for the elements including a dielectric part which mechanically connects but electrically insulates adjacent portions of the structure.

Da Silva teaches a stent including a dielectric part which mechanically connects but electrically insulates adjacent portions of the structure in order to enhance a signal (col. 7, lines 7-24). It would have been obvious to one of ordinary skill in the art at the time of invention to provide a dielectric part which also insulates, as taught by Da Silva, to Fischell in order to better enhance a signal.

Response to Arguments

10. Applicant's arguments with respect to claims 1-26 and 36-47 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DIANE YABUT whose telephone number is (571)272-6831. The examiner can normally be reached on M-F: 9AM-4PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Todd Manahan can be reached on (571) 272-4713. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Diane Yabut/
Examiner, Art Unit 3734

/Todd E Manahan/
Supervisory Patent Examiner, Art Unit 3731